HL-003RF

LED RGB controller

------with touchable color ring

V2.0

User's Manual

(Please read through this manual before use)

Forward

Thanks for choosing our HL-003RF RGB Controller. The complete package includes a controller, one remoter, one connector with antenna, do check if there's any defect during transportation before use, if so, please don't use and inform your supplier immediately.

After-Sales

From the day you purchase our products within a year, if being used properly in accordance with the instruction, and quality problems occur, we provide free repair or replacement services except the following cases:

1. Any defects caused by wrong operations..
2. Any damages caused by unauthorized removal, maintenance, modifying circuit, incorrect connections and replacing chips.
3. Any damages due to transportation, breaking, flooding water after the purchase.
4. Any damages caused by earthquake, fire, flood, lightning strike etc force majeure of natural disasters.
5. Any damages caused by negligence, inappropriate storing at high temperature and humidity environment or near harmful chemicals.
6. Product has been updated.

Safety warnings ⚠

1. Please don't install this controller in lightening, intense magnetic and high-voltage fields.
2. To reduce the risk of component damage and fire caused by short circuit, make sure correct connection
3. Always be sure to mount this unit in an area that will allow proper ventilation to ensure a fitting temperature.
4. Check if the voltage and power adapter suit the controller (please select DC12/24V power supply with constant voltage)
5. Don't connect cables with power on, make sure a correct connection and no short circuit checked with instrument before power on.
6. Please don't open controller cover and operate if problems occur.

The manual is only suitable for this model, any update is subject to change without prior notice.

Product Brief

HL-003RF multifunctional LED controller is a common RGB controller with touchable function, using the most advanced PWM technology; It's dedicated to control overall RGB color changes of full color LED lights with 4-wires, 3 channels (common anode), such as RGB LED module, LED strip, LED flexible tape, and other LED lights.

Ⅰ. Technical Specs:

Model：**HL-003RF**			
Input Voltage：	DC12V-24VDC	Wireless mode	touchable/RF
Loadable Current：	Max 6A×3	Output Power：	216W @12V；432W@24V
Color Modes：	RGB gradual	Grey Steps：	256 steps per RGB
Remoter material	ABS+PC	Remoter Size：	L115×W55×H20(mm)
Intensity Steps：	8 Steps	Controller size：	L83×W63×H23(mm)
Working Temp：	-35℃—55℃	Packing Size：	L120×W67×H56(mm)
Controllable Distance：	Max 30M	Gross Weight：	152g
Accessories：	2 pcs AAA batteries	Power Amplifier：	Compatible with our power repeater

Ⅱ. Function Instructions

Sign	Button	Description
	On/Off	red button, switch on or switch off
	Color Modes(15 modes)	Light changing mode(15 modes, see chart)

	White lighting:	White color mode（RGB all light one）.
	Intensity up	Increase the brightness by every pressing, total 8 steps.
	Intensity down	Decrease the brightness by every pressing, total 8 steps.
	Color Ring	In the color lighting mode, slide your finger on the color ring, choose the color you need optionally, and the color ring is only effective for the body finger.

Ⅲ. Matching of controller and remoter

The distance of wireless control is about 30 meters. One remoter can simultaneously control all valid code within the effective distance, please operate as per the following ways:

1. Press Intensity up once on the remoter within 3 seconds when first switch on , the light will blink 3 times, then the controller can be controlled by this remoter.
2. It can't affect the finished matching after changing the battery, no need additional setting after loading the new battery, it can be used directly.
3. When you want to clear the code, press Intensity up five times when switching on again, the light will blinker 6 times quickly if clearing is successful.

Ⅳ. Installation battery of the Remoter

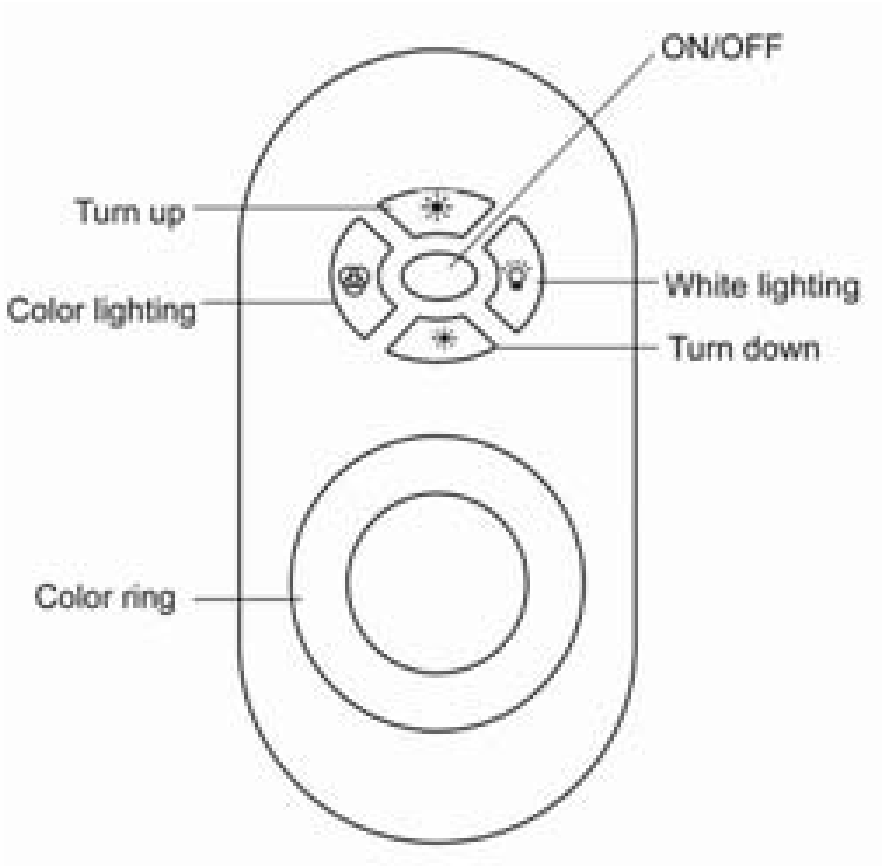
This remoter is used 2pcs AAA batteries, each voltage is 1.5V.
Open the cover of the battery; load 2pcs AAA batteries correctly as per the positive and negative instructions in the battery pack.

Notice: When loading the battery, please remember not to touch the color ring or use the palm to cover the color ring, use the remoter 10 seconds later. If happening to touch the color ring, the remoter has no

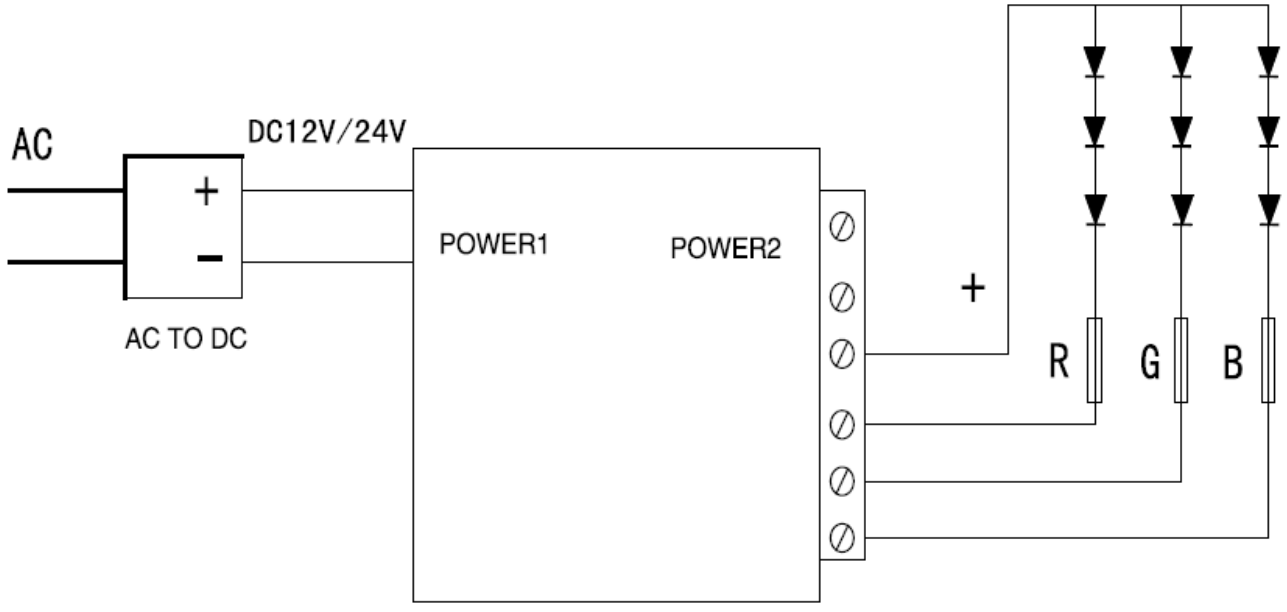
reaction after changing the battery, please take off the batteries, and reload the battery 10 seconds later.

Ⅴ. Product Picture

1. Remoter and sketch diagram：



2. Connection diagram sample：



3. Remoter back and battery:

（※Note: We apologize for not providing the battery due to the uncontrollable cases such as air freight etc）

4. Modes details(Press Key to have 15 modes in turn)

Sequence	Modes
1	Auto color changing, 8 steps of brightness adjustment
2	3 color Jumpy, 8 steps of brightness adjustment
3	7 color Jumpy, 8 steps of brightness adjustment
4	3 color jumpy to gradual, 8 steps of brightness adjustment
5	7 color jumpy to gradual, 8 steps of brightness adjustment
6	Red color jumpy, 8 steps of brightness adjustment
7	Blue color jumpy, 8 steps of brightness adjustment
8	Purple color jumpy, 8 steps of brightness adjustment
9	Green color jumpy, 8 steps of brightness adjustment
10	Yellow color jumpy, 8 steps of brightness adjustment
11	Cyan color jumpy, 8 steps of brightness adjustment
12	White color jumpy, 8 steps of brightness adjustment
13	Red/blue light twinkles alternatively,8 steps of brightness

14	Geeen/blue light twinkles alternatively, 8 steps of brightness adjustment
15	Red/green light twinkles alternatively, 8 steps of brightness adjustment

Ⅵ. Exception Handles

Malfunction	Causation	Settle
No light	1. No power; 2. The protection of the power supply is active; 3. Wrong connection	1. Check the power 2. Check the fault, then power on again; 3. Check the connection
Incorrect color Amplifier not in phase	4. Wrong connection from RGB wire 5. In-phase cable connected wrong	4. Re-connect RGB wires correspondently 5. Re-connect in-phase wires correspondently
No response from the remoter	6. Wrong battery installation; 7. Beyond controllable distance	6. Install the battery correctly; 7. Reduce remote controllable distance;
Delay response from the remoter	8. battery power is not enough;	8. Replace battery;
Uneven intensity between front and rear, with voltage drop	9. Output cable is too long 10. Wire diameter is too small 11. Overload beyond controller or power supply capability	9. Reduce cable or use loop supply. 10. Change wider wire 10. add power amplifier
Signal chaos between controller and remoter	12. Controlled may be controlled by other remoters;	12. Clear the memory as the No. 3 and No.1(See Matching of controller and remoter)

Friendly reminding：The effective power of switching mode power supply is 80%, the actual power should be more than actual load of LED lights, usually at least 20% more.

For more details about our product, please visit:
http://www.hiline-electronics.com/